

IN THE CLAIMS:

The text of all pending claims is set forth below. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original) or (currently amended).

Please AMEND claims 1, 6, 7, 15 and 16 in accordance with the following:

1. (Currently Amended) A speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

a dictionary data compression part for compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

a dictionary data expansion part for expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion position, and the compressed waveform data, and the ~~starting~~starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis.

2. (Original) A speech data compression/expansion apparatus according to claim 1, wherein, in the compression position determining part, the part used for speech synthesis in the waveform data is specified, and the starting point and the ending point for compression are provisionally set before and after the part,

the apparatus further includes:

a dictionary data compression part for compressing the waveform data with respect to the specified compression interval;

a dictionary data expansion part for expanding the compressed waveform data; and

an SNR calculating part for calculating an SNR with respect to the expanded waveform data, and

the specified compression interval, having a highest SNR, is determined as a compression/expansion position, and the compressed waveform data is registered in a database as the waveform data used for speech synthesis.

3. (Original) A speech data compression/expansion apparatus according to claim 1, further comprising an expansion position determining part for setting a starting point and an ending point for expansion before and after the compressed waveform data registered in a database as the waveform data used for speech synthesis,

wherein the waveform data is expanded with respect to an expansion interval specified by the starting point and the ending point for expansion in the dictionary data expansion part.

4. (Original) A speech data compression/expansion apparatus according to claim 1, wherein, in the compression position determining part, the starting point and the ending point for compression are determined in a pitch unit.

5. (Original) A speech data compression/expansion apparatus according to claim 1, wherein, in the compression position determining part, the starting point and the ending point for compression are determined in a frame unit.

6. (Currently Amended) A speech data expansion apparatus for expanding the waveform data stored in a database, compressed by the speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

a dictionary data compression part for compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

a dictionary data expansion part for expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion position, and the compressed waveform data, and the ~~starting~~starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis.

7. (Currently Amended) A speech data expansion apparatus for expanding the waveform data stored in a database, compressed by the speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

a dictionary data compression part for compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

a dictionary data expansion part for expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion position, and the compressed waveform data, and the ~~starting~~starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis, and wherein, in the compression position determining part, the starting point and the ending point for compression are determined in a frame unit.

8. (Original) A speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and determining a compression position containing the part;

a dictionary data compression part for compressing the waveform data with respect to the compression position;

an expansion position determining part for setting a starting point and an ending point for expansion before and after the compressed waveform data; and

a dictionary data expansion part for expanding the compressed waveform data with respect to an expansion interval specified by the starting point and the ending point for expansion,

wherein the specified expansion interval, in which an expansion result of the compressed waveform data has highest quality, is determined as an expansion position, and the compressed waveform data, and the starting point and the ending point for expansion are registered in a database as the waveform data used for speech synthesis.

9. (Original) A speech data expansion apparatus for expanding the waveform data stored in a database, in which the expansion interval is determined by the speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and determining a compression position containing the part;

a dictionary data compression part for compressing the waveform data with respect to the compression position;

an expansion position determining part for setting a starting point and an ending point for expansion before and after the compressed waveform data; and

a dictionary data expansion part for expanding the compressed waveform data with respect to an expansion interval specified by the starting point and the ending point for expansion,

wherein the specified expansion interval, in which an expansion result of the compressed waveform data has highest quality, is determined as an expansion position, and

the compressed waveform data, and the starting point and the ending point for expansion are registered in a database as the waveform data used for speech synthesis.

10. (Original) A speech data compression/expansion apparatus according to claim 8, wherein, in the expansion position determining part, the starting point and the ending point for expansion are provisionally set before and after the compressed waveform data,

the apparatus further includes:

a dictionary data expansion part for expanding the compressed waveform data with respect to the specified expansion interval; and

an SNR calculating part for calculating an SNR with respect to the expanded waveform data,

wherein the specified expansion interval, having a highest SNR, is determined as an expansion position.

11. (Original) A speech data compression/expansion apparatus according to claim 8, wherein, in the expansion position determining part, the starting point and the ending point for expansion are determined in a pitch unit.

12. (Original) A speech data compression/expansion apparatus according to claim 8, wherein, in the expansion position determining part, the ending point for expansion is determined based on the number of bytes for bit filling and the starting point.

13. (Original) A speech data compression/expansion method, comprising:

extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion position, and the compressed waveform data, and the starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis.

14. (Original) A speech data compression/expansion method, comprising:

extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

specifying a part used for speech synthesis in the waveform data, and determining a compression interval including the part;

compressing the waveform data with respect to the compression interval;

setting a starting point and an ending point for expansion before and after the compressed waveform data; and

expanding the compressed waveform data with respect to an expansion interval specified by the starting point and the ending point for expansion,

wherein the specified expansion interval, in which an expansion result of the compressed waveform data has highest quality, is determined as an expansion position, and the compressed waveform data, and the starting point and the ending point for expansion are registered in a database as the waveform data used for speech synthesis.

15. (Currently Amended) A speech data expansion system for expanding the waveform data stored in a database, compressed by the speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

a dictionary data compression part for compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

a dictionary data expansion part for expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion position, and the compressed waveform data, and the ~~starting~~starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis.

16. (Currently Amended) A speech data expansion system for expanding the waveform data stored in a database, compressed by the speech data compression/expansion apparatus, comprising:

a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

a compression position determining part for specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

a dictionary data compression part for compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

a dictionary data expansion part for expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion position, and the compressed waveform data, and the ~~starting~~starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis, and wherein, in the compression position determining part, the starting point and the ending point for compression are determined in a frame unit.

17. (Original) A speech data expansion system for expanding the waveform data stored

in a database, in which the expansion interval is determined by the speech data compression/expansion apparatus, comprising:

- a dictionary data input part for extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

- a compression position determining part for specifying a part used for speech synthesis in the waveform data, and determining a compression position containing the part;

- a dictionary data compression part for compressing the waveform data with respect to the compression position;

- an expansion position determining part for setting a starting point and an ending point for expansion before and after the compressed waveform data; and

- a dictionary data expansion part for expanding the compressed waveform data with respect to an expansion interval specified by the starting point and the ending point for expansion,

wherein the specified expansion interval, in which an expansion result of the compressed waveform data has highest quality, is determined as an expansion position, and the compressed waveform data, and the starting point and the ending point for expansion are registered in a database as the waveform data used for speech synthesis.

18. (Original) A computer-readable recording medium storing a program to be executed by a computer, the program comprising:

- extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

- specifying a part used for speech synthesis in the waveform data, and setting a starting point and an ending point for compression before and after the part;

- compressing the waveform data with respect to a compression interval specified by the starting point and the ending point for compression; and

- expanding the compressed waveform data,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as a compression/expansion



position, and the compressed waveform data, and the starting point and the ending point for compression are registered in a database as the waveform data used for speech synthesis.

19. (Original) A computer-readable recording medium storing a program to be executed by a computer, the program comprising:

- extracting speech data containing waveform data from an existing speech waveform dictionary and inputting the extracted speech data;

- specifying a part used for speech synthesis in the waveform data, and determining a compression interval including the part;

- compressing the waveform data with respect to the compression interval;

- setting a starting point and an ending point for expansion before and after the compressed waveform data; and

- expanding the compressed waveform data with respect to an expansion interval specified by the starting point and the ending point for expansion,

wherein the specified compression interval, in which an expansion result of the compressed waveform data has highest quality, is determined as an expansion position, and the compressed waveform data, and the starting point and the ending point for expansion are registered in a database as the waveform data used for speech synthesis.